

Patented May 29 1903

# REYNOLDS'

# Water Cooler and Filter

MANUFACTURED BY

S. F. Reynolds & Co.,

AUBURN, N. Y.

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Special Rates to Dealers and Agents.

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N. B.—Connect to main water pipe with lead or tin lined iron pipe.

# REYNOLDS' WATER COOLER AND FILTER.

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*To the Public :*

We desire to call the attention of our readers who use water which is pumped and forced through water mains in our cities and towns to the REYNOLDS' WATER COOLER AND FILTER. This manner of cooling and filtering water is the product of a series of experiments extending over a period of several years by Mr. Reynolds, *Patentee*. Many attempts had previously been made to filter city water, the great value of which had long been appreciated, however all measures for that object so far had been proved to be unavailing. The great need felt by both the medical profession and the public in general for exactly such an article stimulated the investigation of which have now resulted in such a complete success.

It is unnecessary to remind the medical faculty of the important nature of PURE WATER for drinking purpose, also the diseases that is caused by drinking melted ice. The unprofessional public however have no adequate idea of the impurities contained in ice that is frozen on our rivers and ponds. To tell them that ice is impure and is composed of animal and vegetable matter, and is wholly surface water frozen is the plain truth, and matter of this sort should not be placed in water that is used for drinking.

Please examine our circular, and should you want anything of this description for your office or buildings, or any information in regard to filtering or cooling water, we would be happy to hear from you.

Very respectfully,

*S. F. REYNOLDS & CO.*

## IMPURITY OF ICE.

It is now generally known that the ice which is taken from rivers, lakes and ponds and used in drinking-water, is nothing more than surface water frozen and contains more or less of animal and vegetable matter. From the best medical authority in the country, two-thirds of the summer diseases are caused from drinking water that ice has been placed in it for the purpose of cooling the same.

Look into a water tank in common use that contains water with ice in it, and you will observe instead of the water looking bright and sparkling on the surface as spring water, it has a froth around the edge of the tank and in the bottom you will see a sediment and other decayed matter that has come from the melted ice.

All persons drinking water from a tank which contains ice in the water have to drink more or less of the decayed matter that is frozen in the ice, as you never heard of any one placing a piece of ice in a water tank and afterwards remove any of it. When ice is put in a tank it all melts, and is drawn off with the water and drank.

Nearly all of the decayed matter in lakes and ponds (where the ice for drinking-water is taken) is



drawn to the surface by the effect of the sun, and very little if any ever settles. When the freezing process takes place this decayed matter on the surface of the water is taken up with the frozen water or ice as it is then called. If any one doubts this theory, let them take a piece of ice and melt it and then expose the melted ice water to the sun in the month of July or August for a few hours, and they will be convinced that melted ice water is composed of decayed animal and vegetable matter and is not fit to drink.

You will see by looking at the drawings and cuts, by using *Reynolds' Water Cooler and Filter*, the water is cooled without placing any ice in the drinking water or drinking any melted ice.

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## FILTERED WATER.

Water that is pumped and forced through city mains from lakes and rivers should be filtered before using for drinking or cooking purposes. When water is under a forced pressure it is impossible to separate the sediment from the clear water without filtering, as the pumping pressure carries sediment and water at the same time, and where the water pressure is held up to 80 or 90 lbs. to the square inch,

it is impossible to keep the valves and faucets from leaking as the sand is constantly being forced against them and soon cuts them out.

With *Reynolds' Water Cooler and Filter* the sediment is separated from the water before the water enters the cooling chamber, thus the ice never comes in contact with the drinking water. As the ice melts in the upper part of the cooling chamber it is conveyed off through a pipe from the center of the tank. We do not have our water chamber placed in a tank under water, or keep a body of stagnant water round or about the water chamber, as we find it impossible to keep a water tank so made clean and sweet, as water that is confined will become stagnant and putrid.

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## DESCRIPTION OF THE FILTER.

The filter pipe is constructed so that the opening where the water enters the water chamber is smaller so that when the water is forced up and through the filtering matter it compresses the sand and charcoal, whereby, if the opening was larger at this point than at the feed pipe the water instead of passing through compressed matter would only pass through a loose packing of charcoal and sand or other mat-

ter. We do not use any cotton or woollen cloth for packing *this Filter*, as it is only a matter of a little time when the sand will cut it out, and by constant exposure to dampness it at last effects injuriously the quality of the water, it will also retain to a great extent the sediment and other matter that should pass off through the mud valve.

We only use in *our Filter* hard charcoal, fine sand and a cap composed of hard crystals and asbestos fiber.

With the *Reynolds' Water Cooler and Filter* the ice taken from a swamp is just as good for cooling drinking-water as the so-called pure lake ice.

The upper part of *this tank* is shaped like a bowl for holding the ice or other cooling matter, (see cut on page 9) through the bottom of this ice bowl passing down through the Filter is the waste water pipe, and as fast as the ice melts it passes off through this pipe to the sewer or drains of the building.

Our water chamber or tank is made of cast iron, properly coated on the inside to prevent rust, and strong enough to stand the pressure of any water works in the country.

#### DIRECTIONS FOR USING THE FILTER.

Open the lower valve (or mud valve) and let the water run five minutes every morning, that cleanses

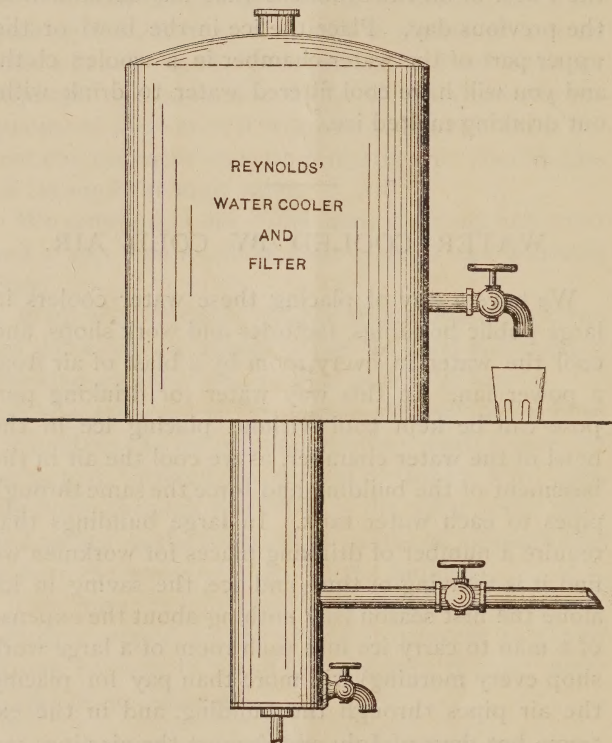


the Filter of all the sediment that has accumulated the previous day. Place the ice in the bowl or the upper part of the water chamber in a woolen cloth, and you will have cool filtered water to drink without drinking melted ice.

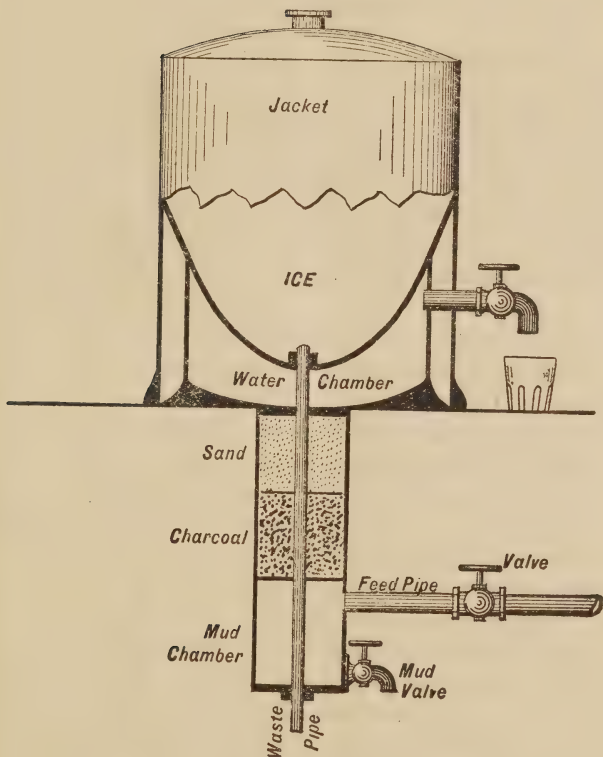
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### WATER COOLED BY COLD AIR.

We have a way of placing these water coolers in large public buildings, factories and work shops, and cool the water in every room by a blast of air from a power fan. In this way water for drinking purpose can be kept cool without placing ice in the bowl of the water chamber, as we cool the air in the basement of the building and force the same through pipes to each water tank. In large buildings that require a number of drinking places for workmen we find it is a saving of time and ice, the saving in ice alone the first season (say nothing about the expense of a man to carry ice into each room of a large work shop every morning) will more than pay for placing the air pipes through the building, and in the extreme hot days of July and August the air pipes can be made to help to cool the building without extra expense. This arrangement is shown in cut on cover.

*Exterior View.*

**Patented May 22d. 1883**



*Interior View.*

Patented May 22, 1883

## DESCRIPTION.

In the basement of the building we place what is known as the *Reynolds' Water Cooler and Filter*, this is composed of a coil of pipe placed inside of a tank, said coil is connected to and is the air pipe from the fan. This air pipe which is inside of the tank is cooled with water and ice. In the centre of this coil is a stand pipe connected to the water works and contains the filtering matter that the water has to pass through before it can get into the water pipes in the building. Up and through each room that the water pipe is placed we also connect this water tank to the water pipe. We place a cap over the ice bowl and connect through this cap the cold air pipe, thus leading the cold air direct into the upper part of the water chamber, and by keeping a current of cold air in the bowl of the water chamber, the water is cooled without the loss of time and expense of filling each water tank every morning.

Cold air can be conveyed from the coil in the tank to any number of buildings by placing the air pipe in the ground so as to protect it from the heat of the sun. When parties have an ice house on their premises, the coil and tank can be placed in the ice house so that the ice will not have to be taken out of the building, as air can be forced from this point just as

well as from the basement of a building, thus saving time, labor and expense.

#### DIRECTIONS.

Every morning open the bottom valve (or mud valve) in the sand pipe to let out the sediment that has accumulated. Place the ice in the tank that contains the coil, it will cool the air as it is passing through the coil, also cool the water as it passes through the filter.

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#### DISEASES IN ICE.

The question of diseases in ice is agitating the metropolis, and doctors of all schools are giving their opinion on the subject. Dr. S. O. Vanderpoel published the following statement in the *World*:

“ I am rather unprepared to give an exact opinion on the matter without investigation and study, but in a general way I may say that I have no doubt on my mind that disease can be disseminated just as well by ice as by water. If I am not mistaken, some time ago certain ice formed from pond water near Boston was suspected to have caused sickness, and when the ice was examined it was found to contain numbers of impurities.



I do not believe that freezing forces out foreign substances, and the assertion that disease germs are expelled cannot be stained, because these germs cannot be isolated so as to be examined microscopically. I have no faith in freezing as a means of destroying animal germs, and this has, I think, been shown in the case of a United States man-of-war, the *Plymouth*, as well as I remember, which had become infected with yellow fever in the Tropics, and was sent down to New Hampshire and left open through an entire and very severe winter in order to kill the poison by freezing process.

But the result was that as soon as ever the vessel went back to a warm climate the fever germs resumed their suspended vitality, and the disease broke out afresh. This instance is not an isolated one, the same thing has frequently occurred. I think a distinction should be drawn between miasma and malaria. The first properly belongs to animal germs and the other to vegetable. Now these animal germs are effectually destroyed and eradicated when exposed to the air and is the reason why, in rivers or large lakes where no sewerage enters the water, the ice from it may be used with impunity.

I know it is claimed that the water supply of Jersey City is pure, being drawn from the Passaic river at a distance from the nearset city, but doubt that

would be the case if it were taken near to the abode of a large community. I certainly should not think of disinfecting a vessel by cold, and I do not see that the formation of ice in rivers can purify the man-of-war I referred to."

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### PURE AIR.

To purify a room, set a pitcher of water in the apartment, and in a few hours it will have absorbed all the respired gases in the room, the air of which will have become purer, but the water utterly filthy. The colder the water is, the greater the capacity to retain these gases. At ordinary temperature, a pail of water will absorb a pint of carbonic acid gas and several pints of ammonia. The capacity is nearly doubled by reducing the water to the temperature of ice. Hence, water kept in a room for a while is unfit for use. For the same reason water from a pump should always be pumped out in the morning before any of it is used. Impure water is more injurious than impure air.

## PECULIARITIES OF ICE.

Some eastern microscopist has been examining ice with the most astonishing results. It was popularly supposed that ice, snow and cold of any kind had a tendency to destroy the germs of disease ; but seeing that small-pox propagated best in cold weather the learned gentleman took to examine ice, and has found some of it as full of things as an old cheese. It is most singular that nobody ever got onto ice before, now that one comes to think about it. It is well known that the bar-keeper, when he sets out a tumbler, always fills it half full of pounded ice, and it is from this tumbler of pounded ice that the unsuspecting victim drinks. The trichenæ in the ice thus enters the system and begins its deadly work ; and it is no unusual thing for the little worms to grow until they become of great size, when the sufferer is obliged to take off his boots and empty them out. For years people have attributed this disease to the whiskey, instead of the ice, but the eastern microscopist dispels the ignorance that has so long enveloped the public like a pall, and shows conclusively that the danger is in the ice. And here we have been abusing the ice man for leaving us so small a chunk during July and August. The man has undoubtedly saved our lives.

## PRICE OF WATER COOLER AND FILTER.

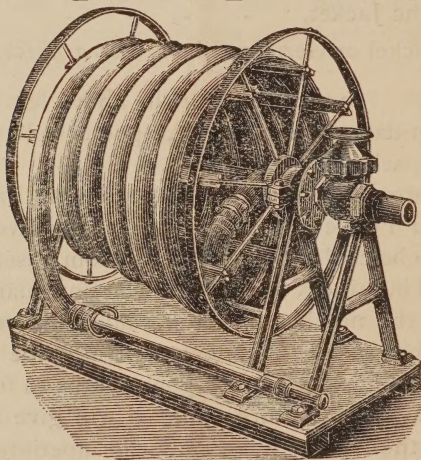
No. 1, Galvanized Iron Jacket,	- - -	\$12.00
" 2, Zinc Jacket,	- - - -	14.00
" 3, Nickel or German Silver, ( <i>extra finish</i> ,)		20.00

Terms,        per cent. off of the above list, cash 30 days from date of invoice. All goods delivered on cars and packed free of charge.

Estimates will be given for equipping Factories, Mills and Public Buildings with the above water tanks, (to be cooled by blast of air from basement as described in this circular) and satisfaction guaranteed. Give us the number of water tanks required, also the number of feet and inches of air pipe for the whole building, also state if you wish us to furnish a power fan, and by return mail we will give an estimate for the whole thing, and will superintend the placing of the tanks in the building.


Correspondence respectfully solicited.

# REYNOLDS' AUTOMATIC HOSE REEL



REYNOLDS & CO., Sole Manufacturers,  
AUBURN, N. Y.

The ONLY SUCCESSFUL AUTOMATIC HOSE REEL  
made in the United States.

 Send for Descriptive Circular and Price List.



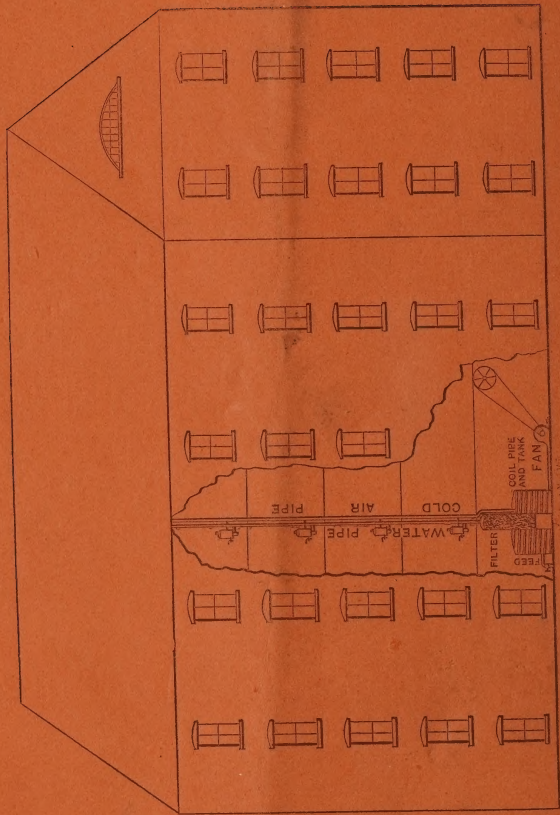
## READ AND CONSIDER.

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If you have any regard for the health of yourself, family or those in your employ, do not compel them to drink unfiltered water, or water that is exposed to the air and gases of the office or building, or water in which ice is placed for the purpose of cooling the same, as it is well known that water and ice will absorb all the poisonous gases that a room contains.

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**Examine this Cooler and Filter Before Purchasing.**



Showing the Process of Cooling Water by Air.—(See page 7.)